



FORM PTO - 1449 SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT				ATTORNEY DOCKET NO.: THI-003 APPLICANTS: Hafeman SERIAL NO.: 10/759,374 FILING DATE: January 16, 2004 GROUP: 1651					
U.S. PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
NAB	A29	2003/0162285 A1	08/28/2003	Tajima					
	A30	2004/0107986	06/10/2004	Neilson et al.					
	A31	2004/0110301 A1	06/10/2004	Neilson et al.					
	A32	2005/0054028 A1	03/10/2005	Teich et al.					
	A33	4,065,357 A	12/27/1977	Groves et al.					
	A34	5,250,419 A	10/05/1993	Bernard et al.					
	A35	6,078,698	06/20/2000	Lorton et al.					
NAB	A36	6,627,158 B1	09/30/2003	Peltier					
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
NAB	B13	95/22406	08/23/1995	WO				Y	Y
	B14	98/15645 A	04/16/1998	WO				N	N
	B15	99/60630	11/25/1999	WO				N	Y
	B16	02/02736 A	01/10/2002	WO				N	Y (abstract only)
	B17	03/000557 A2	06/24/2002	WO				N	Y
	B18	03/004596 A1	01/16/2003	WO				N	Y (abstract only)
	B19	03/059518 A	07/24/2003	WO				N	N
	B20	40 16 617 A1	11/28/1991	DE				N	N
	B21	44 05 375 A1	08/24/1995	DE				N	N
	B22	2 792 333 A	10/20/2000	FR				N	N
NAB	B23	1416041	05/05/2004	EP				N	Y
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
EXAMINER	/Nathan Bowers/			DATE CONSIDERED	05/05/2006				



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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE		
NAB	A27	4,256,832	03/17/1981	Findl <i>et al.</i>					
NAB	A28	4,599,315	07/08/1986	Terasaki <i>et al.</i>					
FOREIGN PATENT DOCUMENTS									
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SUPPLEMENTAL INFORMATION
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U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
NAB	B9	WO 02/061858	08/2002	PCT				NO	YES
NAB	B10	101 36 005 C1	11/2002	DE				NO	NO
NAB	B11	42 17 868 A1	12/1993	DE				NO	NO
NAB	B12	0 722 136 A2	07/1996	EP				NO	NO

OTHER ART, JOURNAL ARTICLES, ETC.

EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)		
NAB	C40	International Search Report for International Application No. PCT/US03/38294, 04/2004	

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EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
NAB	A1	4,711,851	12/08/1987	McNamara et al.			
	A2	5,104,804	04/14/1992	Humphries et al.			
	A3	5,278,048	01/11/1994	Parce et al.			
	A4	5,468,605	11/21/1995	Harris et al.			
	A5	5,495,850	03/05/1996	Zuckerman			
	A6	5,496,697	03/05/1996	Parce et al.			
	A7	5,536,662	07/16/1996	Humphries et al.			
	A8	5,567,598	10/22/1996	Stitt et al.			
	A9	5,766,875	06/16/1998	Hafeman et al.			
	A10	5,774,214	06/30/1998	Prettyjohns			
	A11	5,792,426	08/11/1998	Portman et al.			
	A12	5,830,138	11/03/1998	Wilson			
	A13	5,959,297	09/28/1999	Weinberg et al.			
	A14	5,998,517	12/07/1999	Gentle et al.			
	A15	6,030,917	02/29/2000	Weinberg et al.			
	A16	6,080,574	06/27/2000	Berndt			
	A17	6,380,605	04/30/2002	Verhaegen			
	A18	6,395,506	05/28/2002	Pitner et al.			
	A19	6,395,555	05/28/2002	Wilson et al.			
	A20	2002-0098592 A1	07/25/2002	Neilson			
	A21	2002-0098593 A1	07/25/2002	Neilson			
	A22	2002-0132360 A1	09/19/2002	Neilson			
NAB	A23	2002-0146345 A1	10/10/2002	Neilson			
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NAB	A24	2002-0146836 A1	10/10/2002	Neilson					
NAB	A25	2003-0059807 A1	03/27/2003	Longmont et al.					
NAB	A26	6,673,532	01/06/2004	Rao					
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EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
NAB	B1	WO 00/32308	06/08/2000	PCT				NO	YES
	B2	WO 00/36410 A1	06/22/2000	PCT				NO	YES
	B3	WO 01/85901 A2	11/15/2001	PCT				NO	YES
	B4	WO 01/85901 A3	11/15/2001	PCT				NO	YES
	B5	WO 02/08385	01/31/2002	PCT				NO	YES
	B6	WO 02/11881 A1	02/14/2002	PCT				NO	YES
	B7	WO 02/083852	05/2002	PCT				NO	YES
NAB	B8	WO 02/099386 A2	12/12/2002	PCT				NO	YES
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
NAB	C1	Beebe D.J., Mensing G.A., Walker G.M. (2002) "Physics and applications of microfluidics in biology." <u>Annu. Rev. Biomed. Eng.</u> , 4 , 261-86							
NAB	C2	Beebe D.J., Moore J.S., Bauer J.M., Yu Q., Liu R.H., Devadoss, C., Jo B.H. (2000) "Functional hydrogel structures for autonomous flow control inside microfluidic channels. <u>Nature</u> , 404 , 588-90							
NAB	C3	Bousse, L., Cohen, C., Nikiforov, T., Chow, A., Kopf-Sill, A.R., Dubrow, R. and Parce, J.W. (2000) "Electrokinetically Controlled Microfluidic Analysis Systems." <u>Annu. Rev. Biophys. Biomol. Struct.</u> 29 , 155-181							
NAB	C4	Brecht & Gauglitz, "Optical probes and transducers," Biosensors and Bioelectronics, 10, p. 923-936, 1995							
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EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)	
NAB	C5	Clark, L.C. <i>Jnr. Ann. NY Acad. Sci.</i> 1962; 102:29-45
	C6	B. Cunningham, P. Li, B. Lin, J. Pepper, "Colorimetric resonant reflection as a direct biochemical assay technique," <i>Sensors and Actuators B</i> , Volume 81, p. 316-328, Jan. 5, 2002
	C7	Flora K and J Brennan. Comparison of Formats for the Development of Fiber-Optic Biosensors Utilizing Sol-Gel Derived Materials Entrapping Fluorescently-Labeled Proteins. <i>Analyst</i> , 1999, 124, 1455-146
	C8	Ge X, Kostov Y, and G Rao. High Stability non-invasive autoclavable naked optical CO ₂ sensor. 2003. <i>Biosensor and Bioelectronics</i> 18:pp.857-865
	C9	Gesinski RM, Morrison JH, Toepfer JR. "Measurement of oxygen consumption of rat bone marrow cells by a polarographic method." <i>J Appl Physiol.</i> 1968; 24(6):751-754
	C10	Hasselbrink E.F. Jr., Sheppard T.J., Rehm J. (2002) "High-pressure microfluidic control in lab-on-a-chip devices using mobile polymer monoliths." <i>Anal Chem.</i> 74, 4913-8
	C11	Hua S.Z., Sachs F., Yang D.X., Chopra H.D. (2002) "Microfluidic actuation using electrochemically generated bubbles." <i>Anal Chem.</i> 74, 6392-6
	C12	Huber et al., "Direct optical immunosensing (sensitivity and selectivity)," <i>Sensors and Actuators B</i> , 6, p. 122-126, 1992
	C13	Jin et al., "A biosensor concept based on imaging ellipsometry for visualization of biomolecular interactions," <i>Analytical Biochemistry</i> , 232, p. 69-72, 1995
	C14	Jordan & Corn, "Surface Plasmon Resonance Imaging Measurements of Electrostatic Biopolymer Adsorption onto Chemically Modified Gold Surfaces," <i>Anal. Chem.</i> , 69:1449-1456 (1997)
	C15	Lähdesmäki I, Scampavia LD, Beeson C, and Ruzicka J. "Detection of Oxygen Consumption of Cultured Adherent Cells by Bead Injection Spectroscopy." <i>Anal. Chem.</i> 1999; 71: 5248-5252
	C16	Lehmann, M, Baumann W, Brischwein M, Gahle H-J, Freund I, Ehret R, Dreschler S, Palzer H, Kleintges M, Sieben U and Wolf B. "Simultaneous measurement of cellular respiration and acidification with a single CMOS ISFET. 2001." <i>Biosensors & Bioelectronics</i> . 2001;16:195-203
	C17	McConnell, H.M., Owicky, J.C., Parce, J.W., Miller, D.L., Baxter, G.T., Wada, H.G. and Pitchford, S. (1992) "The Cytosensor Microphysiometer: Biological Applications of Silicon Technology" <i>Science</i> 257: 1906
	C18	Metzgar, R., Deglmann, C.J., Hoerrlein, S., Zapf, S. and Hilfrich, J. (2001) <i>Toxicology</i> 166, 97-108
NAB	C19	Morhard et al., "Immobilization of antibodies in micropatterns for cell detection by optical diffraction," <i>Sensors and Actuators B</i> , 70, p. 232-242, 2000

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NAB	C20	Motterlini et. al., "Depression of Endothelial and Smooth Muscle Cell Oxygen Consumption by Endotoxin," American Journ. of Physio. vol. 275, No. 168 p. 776-782, Sep. 1998
	C21	O'Riordan TC, Buckley D., Ogurtsov V, O'Connor R., Papkovsky DB "A cell viability assay based on monitoring respiration by optical oxygen sensor." <i>Anal. Biochem.</i> 2000; 278(2):221-227
	C22	Owicki, J.C., Bousse, L.J., Hafeman, D.G., Kirk, G.L., Olson, J.D., Wada, H.G. and Parce, J. W. (1994) "The Light-Addressable Potentiometric Sensor: Principles and Biological Applications." <i>Ann. Rev. Biophys. Biomol. Struct.</i> 23: 87
	C23	Panten U and Klein H. "O ₂ consumption by isolated pancreatic islets, as measured in a Microincubation system with a Clark-type electrode." <i>Endocrinology</i> 1982; 111:1595-1600
	C24	Parce W, Owicki J, Kercso K, Sigal G, Wada H, Muir V, Bousse L, Ross K, Sikic B, and McConnell H. 1989. "Detection of Cell-Affecting Agents with a Silicon Biosensor." <i>Science</i> . 1989; 246(4927):243-247
	C25	Pattison R, Swamy J, Mendenhall B, Hwang C, and Frohlich B. "Measurement and Control of Dissolved Carbon Dioxide in Mammalian Cell Culture Processes Using an in Situ Fiber Optic Chemical Sensor." 2000. <i>Biotechnology Prog.</i> 16:769-774
	C26	Pouli, A.E., Karagenc, N., Arden, S., Bright, N., Schofield, G.S., Hutton, J.C. & Rutter, G.A. (1998) "A phogrin-aequorin chimera to image Ca ²⁺ in the vicinity of secretory granules." <i>Biochem. J.</i> , 330, 1399 - 1404
	C27	Robiolio et al., "Oxygen diffusion and mitochondrial respiration in neuroblastoma cells," <i>Am. J. Physiol.</i> 256 (6 Pt 1):C1207-1213 (Jun. 1989)
	C28	Rumsey et al., "Cellular Energetics and the Oxygen Dependence of Respiration in Cardiac Myocytes Isolated from Adult Rat" <i>Journal of Biological Chemistry</i> . 265(5):15392-15399. 1990
	C29	Shenoy MA, Biaglow JE, Barnes ME, Hetzel FW. "Inhibition of cultured human tumor cell oxygen utilization by chlorpromazine." <i>Adv Exp Med Biol.</i> 1983; 159:359-68
	C30	Thorsen, T., Maerkli, S.J. and Quake, S.R. (2002) Microfluidic Large-Scale Integration <i>Science</i> 298, 580-586
	C31	Tolosa L, Kostov Y, Harms P, Rao G. "Noninvasive measurement of dissolved oxygen in shake flasks." <i>Biotechnol Bioeng</i> 2002 Dec 5;80(5):594-7
	C32	Unger, M.A., Chou, H-P, Thorsen, T., Scherer, A, and Quake, S.R. (2000) <i>Science</i> 288, 113
NAB	C33	Vanderkooi et. al., "An Optical Method for Measurement of Dioxygen Concentration Based upon Quenching of Phosphorescence, " <i>J. Biol. Chem.</i> , 262 (12):5476-5482 (Apr. 1987)

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EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)	
NAB	C34	Wada, H.G. Indelicato, S.R., Meyer, L. Kitamura, T., Miyajima, A., Kirk, G., Muir, V.C. and Parce, J.W. (1993) "GM-CSF Triggers a Rapid Glucose Dependent Extracellular Mediated Activation of Acid Production." <i>J. Cell Physiol.</i> 154; 129
NAB	C35	Wiley, C and Beeson, C. (2002) "Continuous measurement of glucose utilization in heart myoblasts." <i>Analytical Biochemistry</i> 304, 139-146
NAB	C36	Wilson et al., "The Oxygen Dependence of Mitochondrial Oxidative Phosphorylation Measured by a New Optical Method for Measuring Oxygen Concentration," <i>J. Biol. Chem.</i> , 263:2712-2718 (1988)
NAB	C37	Wodnicka M, Guarino RD, Hemperly JJ, Timmins MR, Stitt D, Pitner JB. "Novel fluorescent technology platform for high throughput cytotoxicity and proliferation assays." <i>Journal of Biomolecular Screening</i> . 2000; 5:141-152
NAB	C38	Wolfbeis OS, 2002. "Fiber-Optic Chemical Sensors and Biosensors." <i>Annal of Chem.</i> 2002; 74:2663-2678
NAB	C39	Handbook of Fluorescent Probes and Research Products published by Molecular Probes, Inc., Eugene, Oregon, USA, http://www.probes.com/handbook/ (accessed 3/12/04), Table of Contents, 2 pages
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